AMENDMENT OF THE SPECIFICATION

Applicant respectfully requests that the following paragraphs replace corresponding paragraphs of the specification. The revisions correct typographical errors and do not add new matter:

[0021] Client-side embodiments may receive the WOL packet at, for instance, a network interface card (NIC), recognize that the WOL packet includes an OSPID that describes the bootable image to boot, and implement an alternative boot sequence to boot from that bootable image. Some embodiments will delete the OSPID after the first boot to avoid, mistakenly, reusing the OSPID to select the bootable image in a subsequent boot. Further embodiments include a setting to prevent the OSPID from being deleted, making the bootable image a permanent selection.

[0022] Turning now to the drawings, FIG 1 depicts one embodiment of a data processing system 101 for remotely selecting a bootable image via a wake-on-LAN (WOL) packet for a WOL capable computer. System 101 includes a server computer system 102 ("server") coupled to one or more remote client computer systems 104 ("clients"). The clients may be equipped with Wake-on-LAN ("WOL") capability, which provides them with the ability to be "Woken up" while in a low-power state and returned to a full power state, and to boot a bootable image identified by a operating system partition identification (OSPID) when a WOL-equipped network interface card (NIC) receives the appropriate WOL command with the OSPID. WOL is also sometimes known as remote wake-up or ~~Magic Packet~~MAGIC PACKET™ technology. In system 101, the server 102 and client 104 may be located at the same location, such as in the same building or computer lab, or could be geographically separated. While the term "remote" is used with reference to the distance between the server 102 and client 104, the term is used in the sense of indicating separation of some sort, rather than in the sense of indicating a large physical distance between the systems. In fact, the server 102 and client 104 may be physically adjacent in some network arrangements.

[0038] When the communication subsystem 94 is in WOL mode (e.g., when the client 104 is asleep), communication subsystem 94 scans all incoming frames addressed to client 104 for a specific data sequence which indicates that the frame is a WOL or ~~magic packet~~ MAGIC PACKET™ frame. WOL packets and frames are described in more detail in relation to FIGS 5A and 5B. If the communication subsystem 94 scans a frame and does not find the appropriate WOL sequence, it discards the frame and takes no further action. If it detects the WOL sequence, however, it then alerts the power management circuitry 66 to wake up or power on the system.

[0046] As another example, a data packet like data packet 504 having an OSPID is depicted in FIG 5B. In FIG 5B, data packet 504 comprises a ~~magic packet~~ MAGIC PACKET™ frame 514, command extensions 516, and an OSPID packet 518. ~~Magic packet~~ MAGIC PACKET™ 514 comprises the source address (server 102 MAC address), destination address (e.g., a client 104 MAC address or a multi-cast address for a broadcast ~~magic packet~~ MAGIC PACKET™), and a synchronization stream. The synchronization stream is typically six (6) bytes of FFh and is used to help client 104, particularly communication subsystem 94, recognize a frame as a ~~magic packet~~ MAGIC PACKET™ frame 514. A delineator such as six bytes of FFh is easy for hardware to detect and identifies the information as a ~~magic packet~~MAGIC PACKET™ 514. In the embodiment depicted in FIG 5B, the content of ~~magic packet~~ MAGIC PACKET™ 514 is a six bytes of "FF" followed by 16 copies of MAC addresses (with, for example, 8 copies of server MAC address and 8 copies of client MAC address) with no breaks or interruptions. In one alternative embodiment, there are 12 copies of MAC addresses, where 6 copies are client MAC addresses and 6 copies are server MAC addresses. The MAC addresses may be located anywhere within the data packet 504 but are preferably preceded by a synchronization stream. Client 104 will, in one embodiment, confirm that the ~~magic packet~~ MAGIC PACKET™ 104 contains the proper (and proper number of) synchronization stream, server MAC address, and client MAC address before initiating the power on process.

[0047] In an alternative embodiment, a broadcast ~~magic packet~~ MAGIC PACKET™ 514 may be used. In this embodiment, the ~~magic packet~~ MAGIC PACKET™ 514 may be received

by all clients 104 on the network and the destination MAC address is listed as, for example, all ones (1's). This will indicate to client 104 that the ~~magic packet~~ MAGIC PACKET™ 514 is intended for it, even though the client MAC address is not included. In another embodiment, a multicast broadcast to a specified group of clients 104 may be utilized.

[0050] When client 104 receives a network packet 500, it is received by physical layer and placed on the MII bus. When network packet 500 comprises a ~~Magic packet~~ MAGIC PACKET™ 514 (as shown in FIG 6), the MAC detects that it includes ~~Magic packet~~ MAGIC PACKET™ 514, ignores any command extensions 516, and determines the presence of OSPID packet 518. When OSPID packet is present, the OSPID packet is stored in non-volatile memory accessible to POST. POST may then instruct the boot manager, or boot loader, to load the boot image indicated by OSPID packet 518.